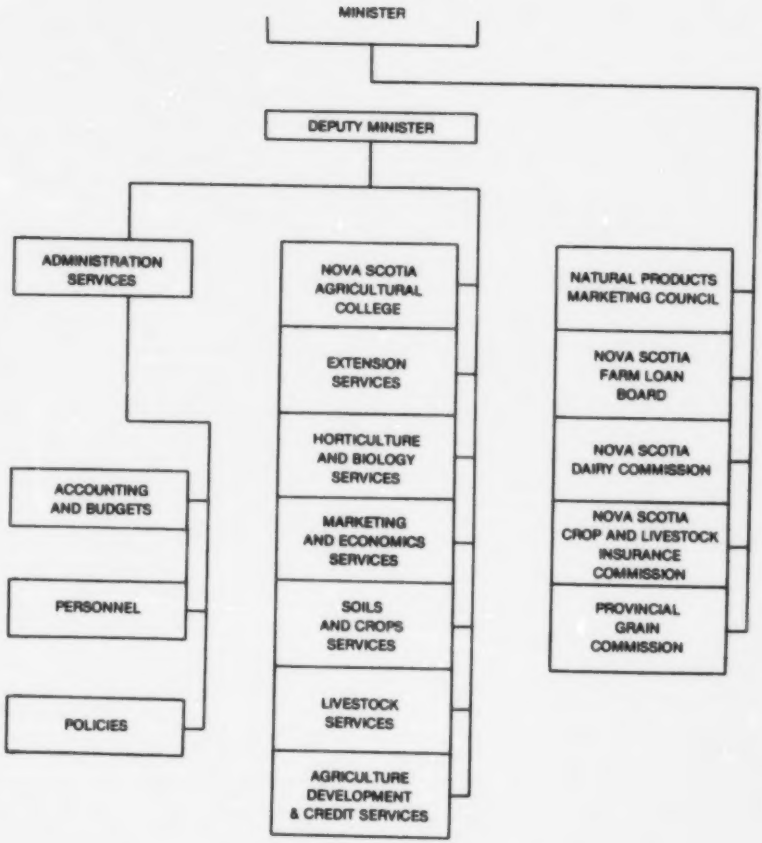
Nova Scotia

ANNUAL REPORT

for the fiscal year
ending March 31, 1985

Department of Agriculture and Marketing


MINISTER
DEPUTY MINISTER
ADMINISTRATION SERVICES
ACCOUNTING AND BUDGETS
PERSONNEL
POLICIES
NOVA SCOTIA AGRICULTURAL COLLEGE
EXTENSION SERVICES
HORTICULTURE AND BIOLOGY SERVICES
MARKETING AND ECONOMICS SERVICES
SOILS AND CROPS SERVICES
LIVESTOCK SERVICES
AGRICULTURE DEVELOPMENT & CREDIT SERVICES
NATURAL PRODUCTS MARKETING COUNCIL
NOVA SCOTIA FARM LOAN BOARD
NOVA SCOTIA DAIRY COMMISSION
NOVA SCOTIA CROP AND LIVESTOCK INSURANCE COMMISSION
PROVINCIAL GRAIN COMMISSION

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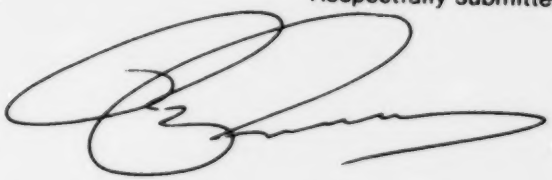
His Honour,
The Honourable Alan R. Abraham, C.D.
Lieutenant-Governor of Nova Scotia

May It Please Your Honour:

I have the honour to submit the Annual Report of the Department of Agriculture and Marketing for the fiscal year ended March 31, 1985.

Respectfully submitted,



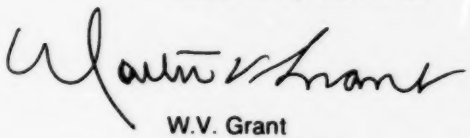
Roger Bacon
Minister

The Honourable Roger Bacon
Minister of Agriculture
and Marketing
Province of Nova Scotia
Halifax, Nova Scotia

Dear Sir:

I have the honour of presenting the Report of the Department of Agriculture and Marketing for the fiscal year ended March 31, 1985.

Respectfully submitted,



W.V. Grant
Deputy Minister

NOVA SCOTIA AGRICULTURAL COLLEGE

OVERVIEW

The year 1985 marked the 100th Anniversary of the founding of the first school of agriculture in Nova Scotia. This school came into existence by an Act of the Legislature in 1885 and was located at the Provincial Normal School in Truro. To commemorate this part of our history, Harvey W. MacPhee, retired Professor of History at the Nova Scotia Teachers College, was commissioned to write a brief history of the School. This history will be published in the near future by the College.

The first [B.Sc. (Agr.)] degrees were awarded to 43 students on May 1st by the President and Vice-Chancellor of Dalhousie University, Dr. W. Andrew MacKay. This came about as a result of an agreement signed on February 13, 1985, by Dr. MacKay; Dr. A. Gordon Archibald, Chairman of the Board of Governors, Dalhousie University; The Honourable Roger S. Bacon, Minister of Agriculture and Marketing and the Principal of the College, Dr. H.F. MacRae. The agreement provides an affiliation with Dalhousie whereby students recommended by the College and approved by the Senate of Dalhousie for the award of Bachelor of Science (Agriculture) degrees would receive degrees in the names of both institutions. The agreement also provides for consideration of joint graduate programs.

The new extension to Cox Institute was occupied by the Departments of Chemistry-Soils, Biology, Mathematics and Physics in September, 1984.

COURSES OFFERED

The following is a summary of courses offered at the College:

Degree

A complete four-year course leading to a degree in Agricultural Sciences [B.Sc. (Agr.)] is offered with a choice of the following options:

- Plant Science
- Animal Science
- Agricultural Economics
- Plant Protection
- Agricultural Chemistry-Soils
- Agricultural Mechanization

Students can take other options without interruption by transferring to the third year of the B.Sc. (Agr.) program at Macdonald College of McGill University, the University of Guelph, the University of Maine, or a faculty of agriculture at another university.

Engineering students who successfully complete the three years of the Agricultural Engineering degree course can proceed to Macdonald College of McGill University or to the University of Guelph, or can apply to the Technical University of Nova Scotia, or to another engineering faculty to complete their program of study.

Students who wish to take the three-year Pre-Veterinary program to meet admission requirements of the Atlantic College of Veterinary Medicine at the University of Prince Edward Island must, after completing the first year, enter the Animal Science option and take a specific selection of subjects. The Pre-Vet program also serves as the first three years of the B.Sc. (Agr.) program, Animal Science option. For other options, it may take more than one more year to complete the B.Sc. (Agr.) program.

Technician

The following two-year programs of study are offered:

Agricultural Business
Agricultural Mechanization
Animal Science
Farm Equipment
Plant Science

Technology

The following two-year programs of study are offered:

Biology Laboratory Technology
Chemistry Laboratory Technology
Landscape Horticulture Technology

The following two-year programs are offered only to students who have successfully completed one year of a specified Technician Course (or equivalent):

Agricultural Engineering Technology
Farming Technology

Students in the Farming Technology Course spend eleven months of their course work (including summers) on farms. Seven of those months consist of structured training under a farmer/instructor.

Agricultural Technology

Agricultural Technology is a one-year program, tailored to meet the needs of the student. Only Technician graduates are eligible to apply for this course.

REGISTRATION

Degree Courses

1984-85	Agricultural Science	Agricultural Engineering	Total
First Year	104	14	118
Second Year	74	17	91
Third Year	52	4	56
Fourth Year	44		44
	274	35	309

1984-85	Technician Courses	Technology Courses	Total
First Year	88	28	116
Second Year	84	24	108
	172	52	224

1984-85	Special Students
Degree (Full-Time)	4
Technician (Full-Time)	8
	12
Degree (Part-Time)	12
Technician (Part-Time)	16
	28
Total Full-Time	545
Total Part-Time	28
	573

VOCATIONAL AND CONTINUING EDUCATION PROGRAMS

Vocational courses have been designed to assist men and women enter or progress in farm or farm related careers. Forty-one courses were held with 905 persons enrolled, totalling 14,285 student training days. In addition to the above, 196 persons were enrolled in four home study courses.

The Canada Employment and Immigration Commission sponsored 440 persons by paying their tuition and, on courses over ten days duration, a training allowance. Details of enrollment can be seen in the following table:

Province	No. of Vocational Students			% of Total Students		
	1982-83	1983-84	1984-85	1982-83	1983-84	1984-85
Nova Scotia	663	427	709	77.8	63.6	78.3
New Brunswick	125	86	82	14.7	12.8	9.1
Prince Edward Island	43	27	36	5.0	4.0	4.0
Newfoundland	11	24	18	1.3	3.6	2.0
Other	10	107	60	1.2	16.0	6.6
	852	671	905	100.0	100.0	100.0

RESEARCH PROJECTS

A total of 79 research projects were active throughout the year. Research funds came from the following sources:

Source	Funds $'000
N.S. Department of Agriculture and Marketing	275
Agriculture Canada	70
N.S.E.R.C.	110
Industry Contracts and Grants	68
Canada-Nova Scotia Agri-Food Development Agreement	81
Total	604

COLLEGE FARM

Crops

The 1984-1985 crop year marked the fourth year of a detailed five-year rotational cropping plan. Sixteen point four hectares (41 acres) were new seeded to a grass, clover and oat mixture; approximately 14 ha (35 acres) of this was harvested as grass silage. All of the corn seeded [26.5 ha (66 acres)] was harvested as corn silage. Thirty-two point three hectares (80 acres) were cut as hay and 37.7 ha (93 acres) were kept in pasture. Approximately 26 ha (64 acres) were seeded to feed grains; winter wheat, 10 ha (25 acres) and barley, 16 ha (40 acres).

Livestock

Livestock numbers as of March 31, 1985, were:

Dairy Cattle	
Ayrshires	52
Holsteins	50
Beef Cattle	
Herefords	18
Shorthorns	56
Crossbreds	42
Lacombe	31 (on lease)
Sheep	
Traditional	118
Intensive	89
Others	22
Swine	381
Poultry	
Poultry I	1888
Poultry II	2060
Foxes	39

Dairy B.C.A. rolling herd averages as of March, 1985, were M164 F171 for Ayrshires and M161 F162 for Holsteins. Four studies are currently in progress in the dairy barn.

Eighty-seven beef cows calved in 1984 producing 70 marketable calves. Re-breeding was to Lacombe bulls in the case of the Lacombe Shorthorns and yearling heifers and to the Simmental bull for all others. Because of the increase in N.S.A.C.'s numbers resulting from the Lacombe importation, 30 (native) cow-calf pairs were summered at Cape John Community Pasture.

The trial comparing productivity of the Traditional and Intensive ewe flocks continued with each flock lambing once in 1984 (March and September, respectively). Lambing percentages were 158 and 164, respectively. This last figure (164 percent) represents the first and only time in which the Intensive flock has outproduced the Traditional at a single lambing. However, despite continued success in achieving "accelerated" lambing, the greater output from the Intensive flock cannot carry the greater feed costs involved.

The swine unit maintained a herd size of 48 sows and gilts. A total of 958 pigs were born live: an average of 20.38 live pigs per sow per year and weaning 17.6 pigs per sow per year. Approximately 48 percent of the hogs marketed at index 105 and better, 19 percent between index 102-103, 27 percent at index 100 or lower and 6 percent as sows, boars and gilts. Of the 27 percent marketed index 100 or lower, 65 percent were index 80. The majority of these hogs were from Nappan test. A co-operative agreement for purposes of Swine Research resulted in 319 of the hogs marketed being fed at the Nappan Experimental Farm on several feeding and management experiments.

Three broiler flocks totalling approximately 8,000 birds were grown during 1984-85. One of these was associated with a project concerning the scabby hip problem. Two were required for teaching purposes.

Phase I construction of the Fur Unit was initiated in 1984. Individual pens for 47 vixens and 18 males as well as a breeder/pelter shed were erected. Eighteen of the 26 vixens were bred during the first breeding season of the unit. Semen was collected from males throughout the season and selected samples were frozen for future assessment. Projects to compare fox performance as influenced by housing system, type of feed and frequency of handling will begin in the Spring, 1985. Future expansion in building and animal numbers will facilitate the continuation of these and other projects in physiology, nutrition, behavior and genetics.

LIVESTOCK SERVICES BRANCH

OVERVIEW

The Livestock Services Branch provides services to the total livestock industry in three general areas: (1) provides for rapid and accurate diagnosis of animal diseases for practising Veterinarians and farmers through specially trained Veterinarians; (2) provides expertise in feeding, breeding and management through the Livestock and Poultry Specialists; (3) provides for the regulation, production, inspection, distribution and sale of milk through the Dairy staff.

The Veterinary staff and laboratory facilities support all branches in the Department of Agriculture and Marketing, as well as provide diagnostic services to the Department of Lands and Forests. Laboratory submissions for all species in 1984 were 7,868 specimens. The Livestock Health Services program assisted 45 Veterinarians in 21 clinics working under 23 Livestock Health Services Boards. This program is responsible for the delivery of veterinary services to livestock producers in Nova Scotia. Other programs designed to assist the livestock owners are the Swine Herd Health program and the Dairy Herd Health program. During 1984, the Meat Inspection (Nova Scotia) Act was proclaimed initiating a voluntary meat inspection program for Nova Scotia. Seven abattoirs in the Province have made application for the Meat Inspection Program. Four meat inspectors were hired and, with the approval of the Federal Department of Agriculture, these inspectors are to be trained at Moncton, Fredericton, Charlottetown and Berwick. It is anticipated that the program will be in operation by June of 1985.

The livestock industry was faced with additional pressures during 1984 due to the rising feed costs in the Atlantic area. It is estimated that finished feed is costing approximately $37.00-$47.00 per tonne higher than in Ontario. The sectors most severely affected were the red meats, i.e., beef, pork and lamb. Negotiations are continuing on a tripartite red meat program.

The sheep industry witnessed a stronger price during the year, compared to previous years. Lamb was offered at the Maritime Cattle Market where they were higher in return than the previous year. The Northumberlamb Marketing Co-op, this year, will project to market 5,000 head for the year ending March 31st, 1985. Wool marketings in 1984 were mainly to the Stanfield Plant in Truro and

the Briggs & Little Plant on Prince Edward Island; the Stanfield Plant purchasing 77,000 pounds (35,000 kilograms) and Briggs & Little, 30,000 pounds (13,600 kilograms).

The goat industry, under the Goat Industry Association, was quite active during the year. Eight of the goat producers were officially tested under the D.H.A.S. Program and the Goat Association is presently considering hiring a full-time person to do the D.H.A.S. testing.

The pork industry, during the 1984 year, was hit very hard by low prices. Many producers in the Province were forced to abandon their production because of the cost price squeeze. The transportation costs on grain from Ontario being between $37.00 and $47.00 higher, the competition is such that many of the producers are finding it difficult to remain in business. The total number marketed during the year was 242,148 hogs with an estimated gross value of $35,000,000. The Province still leads the other Provinces in Canada in the quality of hogs marketed.

The dairy cattle sector represents the largest single segment of the livestock industry. 1984 was a relatively good year for Nova Scotia dairymen. It would appear that cow numbers per herd remained about the same as in 1983 and, as the year was coming to a close, some producers found themselves in an over-production situation regarding their MSQ allocation. Prices for dairy cows and heifers were again lower than in the previous year. The D.H.A.S. program continues on about the same level as the previous year. Production per cow in 1984 increased by 50 kg (110 lbs.) over 1983 production. The top herd average in 1984 was 8,436 kg (18,559 lbs.) which was the highest in Nova Scotia's D.H.A.S. history. The number of licensed milk producers recorded on January 1, 1984, was 630. Two hundred and two cream producers were registered in August, 1984, which includes 14 cream shippers residing in New Brunswick and shipping to the Amherst Creamery.

The Dairy Division became a separate entity from the Dairy Commission. They were previously combined under a single budget and single administration. The Dairy Division presently administers Commission regulations dealing with milk production, manufactured dairy products and grading, packaging and the sale of dairy products. The division works with producers through quality visits

and farm inspection to encourage the production of high quality milk. The division also maintains a laboratory service for the determination of quality and composition of milk and dairy products.

The five economic production divisions of the poultry industry are: (1) Egg Production; (2) Pullet Production; (3) Chicken Production; (4) Turkey Production; (5) Hatcheries. The egg segment has 46 registered producers who produce 16.4 million dozen eggs yearly. There are 22 commercial pullet producers with a total pullet quota of 834,666 pullets. There are 66 registered chicken producers in Nova Scotia producing a total of 32.8 million pounds (14.9 million kg) (eviscerated weight) of chicken. There are eleven turkey producers with 3.4 million pounds (1.56 million kg) (eviscerated weight) of turkey. The total farm cash income from the poultry industry is now over $50,000,000. While we may have problems within the industry, this commodity has responded positively to the Supply-Management system.

The fur sector remained very stable during the 1984 year. The mink and chinchilla sectors remained stable in production while the fox sector continued to expand in both producer numbers and pelts produced. In the mink industry, there are 170 producers keeping 66,000 breeding females. These breeding females produced 230,000 mink pelts giving us a farm gross value in the Province of $11.8 million. There are 218 licensed fox producers keeping 4,600 breeders producing 7,500 pelts for a gross farm income of $1.2 million. Of importance to the fur industry in 1984 was the formation of the Nova Scotia Fur Institute. This Institute includes industry and Government representatives and supervises the research that is going on at the Nova Scotia Agricultural College and elsewhere. The Institute has promoted the fox research in progress and is currently considering a program of mink research for the Nova Scotia Agricultural College facility.

The Artificial Insemination industry required considerable attention in 1984. Time was spent dealing with problems relating to the Regulations for the improvement of cattle breeding and the corresponding section of the Agriculture and Marketing Act. Three technicians working for American Breeders took the Attorney General's Department to court claiming that regulations established under Part III of the Agriculture and Marketing Act dealing with the encouragement of cattle breeding were *ultra vires*. The case aginst the Attorney General's Department was dismissed.

BEEF

Production

The following table outlines the total cattle population as of January 1, 1985, with previous estimates for comparison purposes:

Nova Scotia — Cattle ('000)

	January 1984	January 1985
Bulls	1.7	1.7
Milk Cows	36.0	36.3
Beef Cows	26.0	26.3
Milk Heifers	15.0	15.2
Beef Heifers—Replacement	7.0	7.1
Beef Heifers—Slaughter	3.7	3.6
Steers over 1 yr.	10.2	10.2
Calves under 1 yr.	36.0	36.6
Total	135.6	137.0

This table indicates that the number of beef cows increased slightly during the past year. The number of beef heifers remained constant. There was some increase in the number of calves. In general, beef numbers have increased throughout the past year.

Prices

Slaughter cattle prices increased slightly in 1984 from the previous year. A1, A2 steers averaged $72.90/cwt. ($160.00/100 kg) at the Truro Sale compared to $68.25/cwt. ($150.00/100 kg) in 1983. During the same period, D1, D2 cows sold at $47.90/cwt. ($105.38/100 kg) compared to $46.27/cwt. ($101.89/100 kg) in 1983.

In 1984, two Feeder Cattle Sales were held in Truro. The average price at the October 9th Sale was $78.53¢/lb. ($1.72/kg), while at the October 23rd Sale, the price averaged 72.90¢/lb. ($1.60/kg). The overall average for both Sales on 2,195 cattle was 76.35¢/lb. ($1.68/kg), which was 4.3¢/lb. (9.5¢/kg) higher than in 1983.

AVERAGE PRICE — TRURO FEEDER SALE

1980	1981	1982	1983	1984
$80.90	$65.38	$67.10	$72.05	$76.35

Choice and good steer calves averaged 81.7¢/lb. ($1.79/kg) compared to 78.1¢/lb. ($1.72/kg) in 1983. Quality was extremely good at both sales. The sales returned a total of $925,496.00 for the 1,212,100 lbs. (550,955 kg) of beef sold.

Improved Sire Policy

Assistance was paid towards the purchase of bulls during the year as follows:

	1980	1981	1982	1983	1984
Purebred Herd Sires	32	28	22	33	38
Commercial Herd Sires	132	131	123	121	167
Total Assistance Paid	$ 51,650	$ 37,175	$ 43,300	$ 54,450	$ 74,600
Value of Bulls	$205,367	$246,005	$177,865	$192,200	$277,920

All bulls must be performance tested either at home or at the Maritime Beef Cattle Test Station and meet minimum standards for rate of gain and yearling weight. This has helped to reduce time spent on selection and inspection of bulls. This policy has also helped to educate producers in the use of performance records and their application and practical breeding programs.

Beef Cow-Calf Support Program

This program was developed in co-operation with the Nova Scotia Cattlemen's Association. Its purpose is to increase the production of beef cattle in Nova Scotia and provide some economic stability to the beef cow-calf sector of the industry.

1984 Summary

Number of Applications	508
Number of Animals Paid On-Total Number	15,408
Average Per Application	30
Amount of Money Paid Out-Total Amount	$616,320
Average Per Application	$ 1,213

Performance Testing

We continue to participate in the Federal-Provincial R.O.P. Beef Program with 175 herds enrolled in the Home Test Program. This program is designed to assist breeders in selecting replacement heifers and herd sires on the basis of rate of gain. It is a very valuable aid in a selection program. During the fall of 1984, 176 herds were enrolled in Home Test, making an increase of herds from the previous year.

In addition, the Maritime Beef Cattle Test Station continues to operate on a year-round basis at Nappan. Since 1966, 2,267 bulls have been tested at Nappan.

During 1984, 188 bulls were tested at Nappan. About 60 percent of all bulls tested were from Nova Scotia.

The Test Station at Nappan also offers excellent facilities for the Annual Bull Sale held in April of each year.

Other Programs

During 1984, plans have been developed for an expanded beef cattle research program in the Atlantic Provinces. Our Department has placed a Beef Specialist at Nappan and will be involved more closely in supporting the program at the Nappan Experimental Farm. Plans will also be developed for improving the communication of project results to beef producers throughout the Province.

Community Pastures

Livestock numbers remained fairly constant on most Community Pastures during 1984, with some increase noted for Cape John.

The Cape John pasture had 587 head of cattle and 980 sheep and lambs entered. The cattle did very well on pasture with an Average Daily Gain of 1.83 lbs. (.83 kg). No disease or management problems were encountered. In general, patrons were well satisfied with livestock performance on the Cape John pasture in 1984.

The Cape Mabou pasture had 492 head of cattle and 294 sheep and lambs pastured. Cattle performance was excellent with an Average Daily Gain of 1.90 lbs. (.86 kg) reported.

The Minudie pasture continued to operate under lease agreement and 347 head of cattle were pastured for five patrons. Cattle performance was good at this pasture during 1984.

The five Co-operative Pastures located at L'Ardoise, Cheticamp, Glendale, Manchester and Digby were operated under the management of local co-operatives.

DAIRY

Production

The year 1984 was a relatively good one for Nova Scotia dairymen. It would appear that cow numbers per herd remained about the same as in 1983 and, as the year was coming to a close, some producers found themselves in an over-production situation regarding M.S.Q. allocation.

Prices for dairy heifers and cows were again lower than in the past and the price for cull cows was very discouraging. Prices rebounded slightly at the end of the year.

Milk production and per capita consumption were similar to that seen in 1983. With an excellent cropping season and improved forage quality, milk production per cow was up slightly.

Number of Dairy Cows

	Jan. 1/84	July 1/84	Jan. 1/85
Cows for Milk	31,000	30,000	30,000
Replacements	11,000	11,000	11,500
	42,000	41,000	41,500

A number of herds were dispersed in 1984, and in most cases cows and quota were sold. Very few farms were sold as working units and this trend will continue as long as quota prices remain at their present high levels. There has been a good demand for fluid quota for the past three years but a large majority of this quota is being purchased by established producers.

Dairy Herd Analysis Service

At December 31, 1984, there were 205 herds on the owner-sampler D.H.A.S. program. These 205 herds represented 10,589 cows, a slight increase over the same date in 1983.

At December 31, 1984, the 189 herds which had completed at least 12 months on the program had a rolling herd average of 6,257 kilograms (13,794 pounds) of milk with a 3.54 percent butterfat test. Production per cow in 1984 increased by 50 kg (110 lbs.) over pro-

duction in 1983. The top herd average in 1984 was 8,436 kg (18,598 lbs.), the highest in Nova Scotia D.H.A.S. history.

Dairy Division

The Dairy Division, under Livestock Services, became a separate entity from the Dairy Commission as of April 1, 1984. The Dairy Division and the Dairy Commission were previously combined under a single operating budget and jointly administered the dairy industry of the Province. The Dairy Division presently does the following:

1. Administers Commission regulations dealing with milk production.

2. Works with producers through quality visits and farm inspection to encourage the production of high quality milk.

3. Maintain a laboratory service for the determination of quality and composition of milk and dairy products.

4. Inspects and works with dairies in the processing and distribution of milk and dairy products to ensure the best quality product gets to the consumer.

5. Trains and licenses bulk milk tank drivers, and provides lecturers for students attending the Nova Scotia Agricultural College, when required.

6. Administers the Cream Hauling Assistance & Production Incentive policies.

7. Administers Margarine and Imitation Dairy Products Acts.

Milk Production

Statistics Canada figures show milk production for 1984 was 177,852,000 litres (391,274,000 pounds), a 4.0 percent increase over the previous year.

Dairy cattle numbers on our fluid producer farms in 1984 was 31,287, a slight increase of 0.28 percent over 1983. These numbers reflect an average herd size of 51 cows.

Six hundred and fifteen producers were licensed as of December 31, 1984.

Two hundred and two were registered as cream shippers in August, 1984, which includes 14 cream shippers residing in New Brunswick and shipping to the Amherst Creamery.

SWINE

A total of 242,148 hogs were marketed through federally-inspected plants in 1984. The average weekly price for 100 index hogs over the year was $76.10/cwt. ($167.42/100 kg). The gross value of these hogs was in the area of $35,000,000.

Pork Quality

The following is a comparison of how Nova Scotia hogs indexed in relation to the Canadian average in 1979-1984:

Index 102+

	1979	1980	1981	1982	1983	1984
Canada	66.6	65.6	67.4	68.8	79.8	74.2
N.S.	78.6	80.1	74.9	78.8	81.1	83.3

Index 105+

Canada	33.1	33.3	35.0	38.0	39.4	43.7
N.S.	49.4	49.7	49.0	47.7	51.8	52.5

Index 108+

Canada	8.2	8.6	9.4	11.4	12.3	14.2
N.S.	16.2	16.6	16.0	14.9	17.7	17.1

Nova Scotia producers continue to lead other provinces in Canada on the quality of hogs marketed.

Record of Performance Testing

There continued to be strong support for both Home and Station Testing of swine in 1984. However, the number of boars and gilts

tested on the Home Testing Program in 1984 decreased in comparison with 1983. The quality of the animals tested has continued to be on a high level.

A total of 597 boars were tested at Nappan Test Station in 1984 with an Average Backfat of 12.9 mm (.5 in.) and an average of 149 days of age at 90 kg (198 lbs.).

The Station operated at 100 percent capacity, as it did in 1983.

Swine Herd Health Program

There are 110 pork producers enrolled in our Swine Herd Health Program utilizing the services of nine local veterinarians. Visiting of producer herds on a regular basis has resulted in an improved overall management and health situation in the swine herds. This program is of even greater importance during period of low pork prices when top performance is necessary.

Improved Sire Policy for Swine

The quality of hogs marketed in Nova Scotia is, in a large measure, due to the continued use of the best Performance-Tested boars available. Assistance was paid on a total of 306 boars.

Pork Promotion

Further effort was made to promote pork products in 1984 by the joint efforts of the Pork Producers Association of Nova Scotia and the Nova Scotia Department of Agriculture and Marketing. The growth in pork promotion is due, in some part, to the fact that the Pork Producers Association continue to engage a part-time Home Economist. Pork products are promoted by way of T.V., Radio, Newspapers, Trade Fairs, Mall Displays, and Barbeque School and we endeavour to give our support to this promotion as much as possible.

Nova Scotia Pork Price Stabilization Program

A total of 223 pork producers are enrolled in this program, representing over 90 percent of our total production. This program has been very valuable in maintaining our industry during periods of low prices. Without this program, many of our producers would have

found it extremely difficult to survive due to the economic conditions presently in existence.

Swine Breeding Stock Sales

There was continued lower demand for swine breeding stock in 1984 due to continued depressed prices. The value of animals sold through the Nova Scotia Swine Breeding Stock Sales Society in 1984 amounted to $71,000.

Producer Organizations

We continue to work closely with both the Pork Producers Association of Nova Scotia and the Pork Producers Marketing Board of Nova Scotia. This close liaison is important in developing programs and policies.

Other Activities

Other areas of work in 1984 included training programs, producer meetings, committee meetings, breed association meetings, livestock marketing, preparation of information material, farm calls, etc.

POULTRY

Production

The five economic production divisions of the Poultry industry are as follows: Egg Production; Pullet Production; Chicken Production: (a) Cornish Chicken, (b) Light Broilers, (c) Regular Broilers and (d) Roasters; Turkey Production: (a) Broiler Turkeys, (b) Hen Turkeys; Hatchery.

There are 46 registered egg producers in Nova Scotia who produced 16.4 million dozen eggs in 1984.

Pullet Quota Regulations were gazetted in 1984. The regulations were not made retroactive, so those egg producers who grew pullets without quota have now been awarded quota. Controls are now over both the production and marketing of pullets. An updated pullet quota list was issued based on the new regulations.

There are 66 registered chicken producers. Production in 1984 was 20,468,000 kg (45,029,600 lbs.) (live weight), an increase of 12.6 percent over 1983.

Nova Scotia's 1985 percent share of the total Canadian allocation decreased to 3.42 percent from 3.61 percent during 1984. The Nova Scotia Chicken Marketing Board and Signatories have strongly protested this decrease in percentage allocation to the National Farm Products Marketing Council.

Total gross farm income of 1984 Nova Scotia chicken production is $25,378,000, an increase of 26.6 percent. The 1983 gross farm income was $20,050,000.

The new further-processing plant, Eastern Protein Foods Ltd., processes necks and backs of the cut-up trade and fowl. The annual output is estimated at 1.8 million kg (3.96 million lbs.) of mechanically deboned meat which can be used in bologna, weiners, etc.

Hen breast meat, of which 50 percent is being brought in from outside the Maritimes, is being used to manufacture battered and breaded further processed products (nuggets, patties, fingers, etc.). During 1984, 700,000 kg (1.54 million lbs.) of this product was manufactured. The wholesale price for battered and breaded product is $3.56/kg ($1.62/lb). The gross 1984 plant income is estimated to be $4,076,000, an increase of 239 percent over 1983.

There are 11 registered turkey broiler producers, of which one is also a heavy turkey producer.

Farm gate receipts in 1984 were estimated to be $2,944,948, a 10.4 percent decrease over the previous year. The average farm gate price of $1.52/kg (69¢/lb.) was 11¢/kg (5¢/lb.) higher than in 1983.

Nova Scotia producers are trying to increase their production within the National Agency.

Nova Scotia produces 40 percent of the Provincial trurkey meat requirement. Most of the Provincial product is sold as fresh turkey at a premium price. Frozen turkey and turkey products from other Provinces, (Quebec & Ontario), make up the shortfall.

Blood Testing & Vaccination Program

This is the first year that I.L.T. has not been diagnosed in Nova Scotia poultry. The program of I.L.T. vaccination is continuing and has been very successful.

FUR FARMING

The fur farming sector continued its strong standing in the agricultural community in 1984. The mink and chinchilla sector remained stable in production, while the fox sector continued to expand both producer numbers and pelts produced.

Mink Ranching

Mink, as in the past, continues to hold the largest share of the fur industry in Nova Scotia. Presently, there are 170 producers keeping 66,000 breeder females. The trend has been to keep more black females and fewer mutations because the market for the black mink has been more lucrative.

Digby County continues to produce the most pelts in Nova Scotia, holding 70 per cent of the Province's pelt production. There were 230,000 mink pelts produced in Nova Scotia in 1984, of which 75 percent were dark mink. The Canadian average was $51.00 per pelt at the Canada Mink Breeders' sponsored sales. This represents an increase of 20 percent over last year's average. Many of the Nova Scotia producers averaged well over the Canadian average for black mink.

The farm gross from these sales would be in the area of $11.8 million which is an increase of 19 percent over the previous selling season. This represents an infusion of new money into Nova Scotia's economy and since 50 percent of the sales were to foreign countries, it also represents a net benefit of $5.9 million to the Canadian economy.

Fox Ranching

Fox ranching continues to lead the other sectors in expansion. There were 218 licensed producers keeping 4,600 breeder females. This represents a substantial increase over the previous year and is a result of the favourable market conditions.

Approximately 80 Percent of the fox producers are part-time, keeping an average of 21 breeder females per ranch. The largest full-time fox producer is keeping in excess of 200 breeder females.

The industry is well distributed throughout the Province. There are fox ranches in all Counties, except Queens. Yarmouth County produced the greatest number of pelts in 1984, followed closely by Digby County.

The major sale in Canada was held in February, 1985, at The Hudson's Bay Co., Toronto. The top bundle of silver pelts sold for $295.00 and the overall average for silvers was $160.00 which is down 8.5 percent from the previous year. However, 100 percent of the pelts sold and prices are still well above the cost of production.

These figures are very important to Nova Scotia as 93 percent of our production is silver foxes. Nova Scotia fox pelts generate gross farm receipts of $1.2 million. However, the majority of pelts sold in Nova Scotia are well above the Canadian average. With this production, Nova Scotia continues to be the third largest fox-producing Province, behind New Brunswick and Prince Edward Island.

The first Canadian Live Fox Show was co-sponsored by the Nova Scotia Fox Breeders and New Brunswick Fur Breeders' Associations. It was held at the Agrena Complex in Moncton, New Brunswick, with over 400 animals from all over Canada. Nova Scotia had excellent results throughout the Show and walked away with top honours with the top fox of the Show coming from Cape Breton. This is a good indication of the development that has taken place within the Province.

Chinchilla Ranching

The chinchilla sector remains the smallest sector of this Province's fur industry. Although small in comparison, the chinchilla sector remains stable. The pelt average continues in the $26.00 area for the five producers in the Province.

Nova Scotia Fur Institute

During 1984, the Nova Scotia Fur Institute was established. It is comprised of Government and Industry representatives. A facility

was erected on the Nova Scotia Agricultural College farm and is presently housing a breeding herd of silver foxes.

Initial research will center on fox production with mink research coming on stream as the program is developed. With industry support, mink research could begin as early as the next breeding season. The Institute has received financial support from The Hudson's Bay Company and it is hoped that both industry and producer support will grow.

SHEEP

Production

Returns to producers improved in this segment of the industry during 1984. Nearly 5,000 lambs on offer at the Marketing Co-operative project were marketed for the year ending March 31, 1985.

SHEEP & LAMBS SLAUGHTERED

	1979	1980	1981	1982	1983	1984
New Brunswick	353	—	152	677	689	1268
Nova Scotia	1682	1471	2359	5010	6505	6786
P.E.I.	777	736	1138	357	248	128
Newfoundland	589	444	345	362	65	25
TOTAL	3401	2651	3994	6406	7507	8207

Wool marketing in 1984 saw Stanfield's purchase a little over 77,000 pounds (35,000 kg) of wool and Briggs & Little almost 30,000 pounds (13,600 kg). A small amount was purchased by MacAuslands.

The Annual Breeding Stock Sale, sponsored by the Purebred Sheep Breeders Association of Nova Scotia, was held and grossed $11,390.15. The sale had ewe lambs, yearlings, two-year old females and selected R.O.P. tested rams.

ANNUAL BREEDING STOCK SALE PRICES

	1984		1983		1982	
	No.	Average	No.	Average	No.	Average
Ewe Lambs	22	$ 99.40	59	$ 64.48	77	$ 52.70
Yearlings	13	157.40	35	87.49	59	80.34
Two Yr. Olds	6	158.00	14	58.93	27	53.14
Rams	24	232.00	38	190.00	35	262.00

Two feed lamb and cull ewe sales were held. The Mabou Sale saw a gross sale of $39,722.62; 704 lambs, 108 head of breeding stock, 109 culls and 4 rams were sold. The sale in Truro saw 450 head sold for a gross of $24,000.

The Livestock Services Branch continued to work closely with the R.O.P. Ram Test Station at Nappan in 1984. Sixteen Suffolk rams were officially tested for Average Daily Gain and 100-Day Adjusted Weight. Nova Scotia breeders consigned nine head.

The Home Test Record of Performance: Annual Report showed 73 flocks with 7,412 lambs born and 6,547 lambs weaned. These numbers are higher than in 1983. Nova Scotia had the second highest number of lambs on test in 1984. The Home Test Program provides a mechanism for measuring the performance of individual ewes, lambs and sires in a flock compared to the performance of others within the flock.

Assistance Policies

The Livestock Services Branch supervised three sheep policies in 1984. They were: The Improved Sire Policy, Sheep Production Policy and the Sheep Pasture Improvement Policy.

Improved Sire Policy

January 1, 1984-December 31, 1984

Total Number of Rams Bonused — 53

Suffolk	- 33	Rambouillet	- 3
North Country Cheviot	- 5	Hampshire	- 2
Leicester	- 4	Clun Forest	- 2
Dorset	- 4		

Nine rams bonused @ $20.00 (qualifying Super, Class I, and Class II, categories from the Maritime Ram Test Station).

Total Assistance — $3,922.00

Sheep Production Policy

January 1, 1984-December 31, 1984

No. of Yearlings Bonused — 1,454
No. of Producers — 58

Total Assistance — $36,210.00

Sheep Pasture Improvement Policy

January 1, 1984-December 31, 1984

Approximate No. of Acres Fenced — 530.5
Approximate Feet of Wire Used — 39,040
Land Cleared — 47.5

Total Assistance — $16,432.47

GOATS

The Association was quite busy during the year. Some activities were local shows, Maritime Show and Atlantic Show. There are a number of 4-H Club members that have goats as their project throughout Nova Scotia. Eight producers were officially tested under the D.H.A.S. Program. The Association is presently considering hiring a full-time person to do the D.H.A.S. testing.

VETERINARY

The Veterinary section has the following responsibilities:

(a) Collaborates extensively with the Food Production and Inspection Branch, Agriculture Canada, in disease control and Canada Domestic Inspection.

(b) Responsible for the Livestock Health Services program which operates under the Livestock Health Services Act and is carried out by local Livestock Health Services Boards. This program provides for the delivery of veterinary service to livestock owners.

(c) Responsible for the Swine Herd Health program which is available across the Province through nine veterinary practices.

(d) Operates the Veterinary Pathology Laboratory which processes and reports on specimens from all animal species for producers and veterinarians.

(e) Works closely and often collaborates with other sections of the Livestock Services Branch, other Branches of the Department and other Departments of Government.

Meat Insepction Program

The Meat Inspection (Nova Scotia) Act was proclaimed in 1984 initiating a voluntary Provincial meat inspection program for Nova Scotia.

Meetings were held with approximately a dozen abattoir operators and their slaughter facilities were examined by Department staff accompanied by Dr. Robert Taggart of the Ontario Ministry of Agriculture and Food, Toronto. Each operator was visited again specifically to review any deficiencies found in his plant. He was then informed, in writing, of deficiencies in his abattoir and encouraged to correct them and apply for a license to come under the Provincial Meat Inspection Program.

It is anticipated that the program will be in operation by June, 1985.

Livestock Health Services Program

This program is carried out under the Livestock Health Services Act by approximately 45 veterinarians in 21 clinics working under 23 Livestock Health Services Boards. The number of veterinarians in large animal practice varies slightly throughout the year but the numbers have gradually increased over the last few years. This program is responsible for the delivery of veterinary service to livestock producers in Nova Scotia.

The number of services provided, kilometers (miles) driven and the payments to Livestock Health Services Boards are shown for 1982, 1983 and 1984.

LIVESTOCK HEALTH SERVICES PROGRAM 1982-84

Year	No. Clinic* Calls	No. Farm* Calls	Km* Driven	Mi. Driven	Payment** to Boards
1982	2,494	32,011	1,149,557	714,454	$1,170,500
1983	1,993	28,601	1,056,179	656,419	$1,230,250
1984	1,860	29,617	1,078,943	670,567	$1,075,700

* Data from monthly statements which practices submit to Livestock Health Services Boards for payment. Service for horses not included after autumn 1982.

** Payments to veterinary practices are somewhat less than funds requested by Livestock Health Services Boards.

Swine Herd Health Program

The Swine Herd Health Program was made more comprehensive in 1980. The producer is entitled to one herd health visit per month. The Department of Agriculture pays the veterinarian's call fee and 1/3 of his hourly rate while he is on the farm. Not all producers request monthly visits. Some prefer bi-monthly visits and some want less frequent visits. The Department offers similar financial assistance to producers to encourage them to have post mortems done when pigs die in their herds. This is an opportunity that producers should regularly take advantage of. Producers are encouraged to have post mortems done at the veterinary pathology laboratory. When herds are experiencing significant illness or losses, producers would be wise to have carcasses post-mortemed.

The herd health program is successful and will continue to be successful because of the continued cooperation of swine producers, veterinarians, and swine specialists. Production efficiency will increase if they set realistic goals and strive to achieve them.

There are just over one hundred herds enrolled under the Swine Herd Health Program. These farms contain approximately 9,300 brood sows and approximately 60,000 feeder pigs. The number of calls made and post mortems done in 1982, 1983 and 1984 are listed below. The number of services changed only slightly this year.

SWINE HERD HEALTH PROGRAM — 1982-1984

Year	No. of Calls	No. of Post Mortems
1982	799	116
1983	821	188
1984	818	223

Dairy Herd Health Program

During the past year, members of the large animal practice committee and Department veterinarians have met on several occasions to develop data forms and guidelines for the development of a dairy herd health program for the Province. They have received constant support from the Nova Scotia Veterinary Medical Association, the Livestock Health Services Advisory Body and the Department of Agriculture and Marketing.

A budget subject for this function was developed for 1985-86. The computer system for the Department of Agriculture and Marketing will be installed in Cox Institute in 1985 and this equipment should help to make this new program available to producers in 1985.

Veterinary Pathology Laboratory

The veterinary staff contributes extensively to teaching agricultural students in the Animal Science options. We contribute lectures on animal health to ten production courses offered to both technician and degree students over the fall and winter term.

The importance of continuing education for producers and professional people cannot be over-emphasized. We were fortunate in having funds available to bring five speakers to the Province during the year.

Leptospirosis Study — Leptospires are bacteria that infect essentially all animal species, including man. In cows, they are known to cause infertility, abortion and mastitis. During the winter of 1984, one of the veterinarians in Antigonish collected blood samples from cows in one herd and found that some animals had antibodies against certain leptospires. Blood samples were collected by Agriculture Canada veterinarians and tested in their laboratories in Ottawa. One thousand blood samples were collected from 23 herds. Veterinarians reported no evidence of clinical disease in any of the 23 herds tested. With the continued cooperation of Agriculture Canada, we hope to expand this study in 1985.

The number of laboratory submissions has declined gradually in recent years.

In 1984, 110,000 mink blood samples were tested at the Animal Pathology Laboratory for antibodies to Aleutian Disease. This is the largest number of Aleutian disease samples ever tested in a single year and is up from 91,427 samples in 1983. The number of ranches that are Aleutian disease free, or have a very low level of the disease, is steadily increasing. The reason that the number of positive samples remains high is that each year more ranchers are testing under this program and they frequently start with a high percentage of positive mink. As in the past, we encourage ranchers to use this program to rid their ranch of Aleutian disease. We ask their cooperation in encouraging all ranchers to test and manage their ranch so as to eliminate Aleutian disease from Nova Scotia.

MARKETING AND ECONOMICS BRANCH

OVERVIEW

Present and future agricultural marketing concerns in Nova Scotia are going to increase as the industry develops a more production-oriented approach to self-sufficiency and steps have been taken in the right direction.

There is a strong demand for increased self-sufficiency and a greater need to assist producers to achieve marketing objectives. We recognize the need to transfer marketing technology to the farming public through applied research. A new marketing emphasis has been to assist farmers to organize themselves and obtain the maximum share of the consumer dollar from expanded production, as well as having producers capture more of the value-added returns by involving them in agricultural processing.

A marketing strategy has been developed by increasing knowledge about export marketing to overseas and United States markets. Also, market analysis programs have been increased by expanding the availability of market information to producers, analyzing factors influencing supply and demand and helping farmers to better understand factors affecting the marketplace. Marketing systems have been increased through more legislation, and greater use of the Natural Products Act and the Supervisory Council, the Natural Products Marketing Council, which facilitates the establishment of producer-controlled marketing organizations.

Great emphasis has been placed on new development, expansion and modernization in the food processing industry. At present, there are 205 agricultural processing plants employing 6,000 people.

As well as creating new jobs, another long-range objective of the program is to replace imports. Nova Scotia agriculture has a golden opportunity to export many products over the next 20 years, but only if the industry aggressively works to capture those markets. Trade in agricultural products is growing rapidly, particularly in developing countries.

Export potential for two native crops, lingonberries and Chanterelle mushrooms, has been investigated and follow-up potential volume surveys and studies have been made.

The export of Nova Scotia products to St. Pierre and Miquelon is increasing. Also, the export of processed vegetables to world markets has increased yearly. Carrot production and processing (slices and dicing) increased in 1984. Approximately 1,000 acres of carrots were planted and approximately 20 million pounds were harvested. Plans call for further acreage expansion in 1985.

The foodservice industry in the province has long been overlooked as a base to utilize increased poundage of Nova Scotia food products. A foodservice marketing specialist position was established.

MARKETING BOARDS

Nine commodity marketing boards operated in the province under the general supervision of the Natural Products Marketing Council. They were:

(1) Nova Scotia Wool Marketing Board, established 1947

(2) Pork Producers Marketing Board of Nova Scotia, established 1952

(3) Nova Scotia Chicken Marketing Board, established 1966

(4) Nova Scotia Egg and Pullet Producers Marketing Board, established 1966

(5) Nova Scotia Turkey Marketing Board, established 1972

(6) Nova Scotia Flue-Cured Tobacco Growers Marketing Board, established 1973

(7) Nova Scotia Processing Pea Marketing Board, established 1980

(8) Nova Scotia Winter Grain Marketing Board, established 1981

(9) Nova Scotia Potato Marketing Board, established 1982

CO-OPERATIVES

Sales by co-operative organizations will surpass $400 million in 1984, with assets in excess of $150 million and, when these were

added to other co-operative enterprises, the total surpassed one billion dollars with assets of over $300 million.

Co-operatives are now a major economic force in the Province of Nova Scotia and are set for significant increases in the years to come. Management is generally strong, markets are increasing, and economic conditions have, for the most part, put co-operatives in a strong position for the future.

Co-operatives now employ over 3,000 full-time employees, manage over 40,000 acres (16,200 hectares) of forestry land, provide housing for over 1,200 families and market over 70 percent of the agricultural products of the province.

Agricultural marketing co-operatives continue to dominate the activity of co-operatives in Nova Scotia, accounting for over two-thirds of the sales and an equal percentage of the assets of all co-operatives. Over 80 percent of all farmers are members of a co-operative and market their products through an agricultural marketing co-operative.

This year, the highlights of the Co-operative Section were as follows:

(1) Reorganization and refinancing of two major co-operatives were required.

(2) There are over 80 housing co-operatives with an average of 15 family members per co-operative. These 1,200 families and 6,000 people have assets in their co-operative of over $60 million. Housing co-operatives, in just a few years, have grown to be the largest sector of the co-operative system in Nova Scotia when measured in terms of members of organizations and assets employed.

(3) There were 15 co-operatives registered in 1984. Six worker co-operatives were incorporated in 1984, bringing the number of this relatively new type of co-operative to 15. There are 209 co-operatives registered under provincial legislation. Seven co-operatives were struck from the Register and another four long-established co-operative organizations were closed.

(4) Twelve new publications were printed with seven publications updated and four new publications being prepared. Sixty additional audio tapes on management training were added and five video tapes.

(5) Training sessions (11) were held for co-operatives on different aspects of their business especially in relation to their boards of directors.

(6) The Agriculture Directory was written and published.

(7) A number of agricultural marketing projects were promoted including the school cheese and wild rice programs.

(8) There are over 50 agricultural commodity associations in the province. Four new societies were incorporated and assistance was provided to 20 established agricultural organizations in the areas of management, accounting and legal requirements.

(9) Two manpower assessment projects, one involving provincial agrologists, the other ACA Co-op, were undertaken.

GENERAL ECONOMIC ANALYSIS

Increased demand for services was experienced from industry organizations and departmental personnel including senior management. At the same time, hard copy output of economic reports has perhaps never been greater. Areas of in-depth active policy development included hogs, dairy (mostly involving the National Dairy Policy), the domestic feed grain policy, including the western grain transportation initiative, land use and red meat stabilization policy. Less concentrated involvement ranged over a much broader spectrum of issues, problems and developmental opportunities. A Nova Scotia Cattle Marketing Guide and a Nova Scotia Vegetable Marketing Handbook were published.

AGRICULTURAL MANPOWER

Considerable changes have occurred in the method of operating the Agricultural Manpower Committee. The farmer representatives have taken a much more active part in the planning process than in previous years. They have been extremely active both as committee and sub-committee members and have involved the industry in the planning and development of the Farm Certificate Program.

At the same time, the sub-committee is also acting as an advisory committee to the Nova Scotia Agricultural College in the implementation of the Farm Certificate Program, funded by the Employment, Development and Immigration Commission under institutional training and industrial training. This is supplemented by a provincial contribution of $40,700.

The Agricultural Manpower Committee has spent some time in reviewing and experimenting with vocational training programs. Its thinking at the moment is that this committee should be developing vocational courses in co-operation with the commodity groups.

The success of a swine management course directed by an Advisory Committee from the swine industry indicated that the Committee is moving in the right direction in involving the commodity organizations in the education process.

The lowbush blueberry industry has undergone major expansion. New land has been brought into production and new cultural methods of fertilization and weed control could double the yield from existing fields. A major program of training people at the supervisory level is necessary if Nova Scotia producers are to continue to expand this crop.

Farm Labour Pools are providing an excellent service to the farmers of Nova Scotia. They have been responsible for improving relations between the growers and harvesting crews and have introduced new workers into the apple and blueberry harvest. The pools are co-ordinating the efforts of many of the contractors and crew leaders in such a way that these crews have become much more productive throughout the harvesting season.

The lack of skilled labour is still a problem and the only solution is to train individuals through the Farm Certificate and Farming Technology Programs. Wages in the agricultural industry are reasonably competitive. Agriculture is not listed under the National Training Act.

With new programs such as Farm Certificate, there is an opportunity to foster the attitude that farm employment is a desirable occupation and not just a stepping stone to becoming a farmer. We are seeing a gradual increase in the number of skilled workers but as these skilled workers become available, more skilled jobs are created.

MARKETING DEVELOPMENT

Publications

Market Report

The weekly Market Report continues to be an invaluable tool to many (1,500) in agribusiness.

Market Update

The Market Update was first published in 1981. Its general objective is to keep Department staff abreast of the latest happenings in the marketing field. Material is gleaned from various marketing periodicals. As well, marketing observations and experiences of the Branch are reported.

Marketing Facts

This publication is issued at periodic intervals as subject matter becomes available. Unlike the Update, this deals with one subject only, in fairly complete detail, so is a useful reference to be retained by the reader. Material is prepared and submitted by all members of the Branch.

Programs

School Milk Program

During the 1983-84 school year, 545 out of an eligible 577 Nova Scotia schools participated in this program, for a participation rate of 94 percent. The price of milk continues to increase periodically. During the fiscal year, the Nova Scotia Department of Agriculture and Marketing contributed $1,631,315 to the program.

Metric Conversion

This Branch continued to act as metric coordinator for the Department of Agriculture and Marketing and, in so doing, acted as an information source for the Department and the private sector.

Tariff

The Branch continued to act as co-ordinator for the Maritime zone for the application and removal of seasonal tariffs on imported fresh fruits and vegetables.

Regulations

Work with marketing regulations increased since federal Consumer Affairs inspectors rely on provincial legislation in enforcing retail standards.

Retail Price Monitor

The weekly monitoring of retail prices in five Truro stores was continued.

Special Projects

Weather conditions were not favourable for the Chanterelle mushroom. An estimated 80,000 pounds were harvested. Three companies exported it to Europe and Canada in fresh and processed form.

As a follow-up to test marketing in Metro Halifax in 1983, a province-wide promotion of frozen blueberries was held in October, 1984. This was done at the request of the Nova Scotia Blueberry Growers Association, using the specially designed ten-pound box used in 1983. There were 45,652 pounds sold during the week-long promotion.

A fresh wild blueberry market survey was conducted. Approximately 170 tons (154 tonnes) of berries were sold fresh in 1984, as compared to 63 tons (57 tonnes) in 1983. The ten-pound pack is the most popular pack sold. Twelve producers sold fresh in 1984 and seven in 1983.

Other products — lingonberries, fiddleheads and dried flowers — were marketed.

Marketing staff continued to work in the area of red meats, dairy products, poultry and other livestock marketing. A Cattle Marketing Guide was prepared. The Branch co-ordinated a weekly

radio livestock price information program released via Nova Scotia Goverment Services channels. This successful program is carried as a public service by the majority of the Nova Scotia radio stations. Semi-annual or quarterly visits were made to eight red meat and poultry processors in Nova Scotia and, in the Atlantic Provinces, to two provincially inspected plants, six uninspected plants and three egg grading areas. In addition, two cheese processors and ten dairy processors were also visited. Considerable time was spent in obtaining a retail profile of livestock and poultry products. The Livestock Marketing Specialist acts as recording and correspondence secretary to the Nova Scotia Pork Price Stabilization Program.

Staff continued to make regular contact with growers, packers, wholesalers, processors and related federal and provincial government agencies in order to keep informed of developments in the produce marketing systems as they occured and then, in turn, informed the fruit and vegetable industry on marketing matters.

A close working relationship exists with the Maritime Strawberry Council, Eastern Canada Potato Agency, Vegetable and Potato Producers' Association, Wild Blueberry Association of North America, Farm Fresh Marketing Association and the Nova Scotia Fruit Growers' Association.

Overseas trips were made to Cologne, Germany, on behalf of the Wild Blueberry Association of North America and to the U.K. in order to establish better marketing channels for Nova Scotia apples. A roadside marketing tour to the upper New York State area was sponsored.

Considerable time was spent working with the Farm Organizations Joint Services Society office in Blair House, Agricultural Centre, Kentville. The AFDA Market Development Committee meetings and their related fruit and vegetable studies were included in this time. Market information was handled on a daily basis on the "Market Line" during the summer and fall. Direct marketing studies, roadside markets and farmer markets were increased.

Nova Scotia food products were promoted using ads, new four-color apple retail posters and ten commodity brochures. A major ad campaign was developed for the Nova Scotia Fruit Growers' Association and over 50,000 entries were received. Special promo-

tion programs were carried out for potatoes, Fresh for Flavor and milk. A code-a-phone listing U-Pick operators open each day for the strawberry, vegetable and apple seasons and an on-going advertising program of newspaper and radio was used for U-Pick and roadside stand locations. Highway signs were available for strawberries, apples, vegetables and honey.

The demand for viewing the Department slide show, "It's In Our Nature", has been excellent. Considerable liaison with the retail trade in making use of the Nova Scotia point-of-sale material which had been developed was carried on. Press coverage was provided for the Agriculture Canada Wine and Cheese Festival held in Halifax.

HORTICULTURE AND BIOLOGY BRANCH

OVERVIEW

This branch of the Department provides leadership and an advisory service to the horticultural industry on complex scientific techniques of commercial food and ornamental crop production. The work of branch members in commodity groups is often advisory in nature but tends to be developmental as well, particularly when working with the research committees of the various horticultural producers' associations. Horticulture specialists in the branch have also been active on the various sub-committees of the Canada/Nova Scotia Agri-Food Development Agreement, including the Berry Crops, Vegetable and Tree Fruits sub-committees. The branch has also contributed considerable time to the AFDA On-Farm Resource Development, Technology Development and Technology Acceleration Committees.

The Horticultural industry strengthened and expanded again in 1984. The total farm value for horticultural crops in Nova Scotia is in excess of $60 million.

APICULTURE

Honey production was below normal in 1984 with the average yield per hive being 15.7 percent below the ten-year average. The total production is estimated at 233.0 tonnes (256 tons), an eight percent decrease over 1983.

The dollar value of the 1984 crop is estimated at $595,000. If income from hive rentals is included, the total farm gate value is $770,000. This figure does not reflect the true value of the beekeeping industry as it does not include the dollar value of the gain by crops pollinated by honeybees.

Present trends within the industry are to winter a larger percentage of bees and rely less on importation of package bees. There is some potential for a local queen rearing and nucleus hive production industry. The potential for this will increase as the industry becomes more self-sufficient.

Three shipments of package bees were received. Two shipments were trucked by F.W. Jones and Son, Bedford, Quebec

and the third was trucked by Mr. Lawrence Cutts. The packages were mostly in good condition upon arrival. There were some poor packages in the first shipment. The condition of the packages seemed to be the fault of the package producer rather than conditions during transport.

The total number of packages of bees inspected was about 2,700 which is a decrease of 16 percent below 1983. The decrease was in part a result of the increased over-wintering of bees and concern for contagious diseases.

The discovery of *Acarapis woodi* in Texas in July, 1984, caused great concern in the North American beekeeping industry. The honeybee tracheal mite was subsequently found in several other states including New York, Florida and North Carolina.

APPLE MAGGOT CONTROL

A decline in apple maggot was found in 1984 after last year's increase. According to surveys carried out by the Board, 82 percent of the orchards are now free of apple maggot. The apple maggot survey results for the past seven years are given in the following table:

	1978	1979	1980	1981	1982	1983	1984
No. of Registered Growers	338	326	272	268	253	236	230
No. of Blocks	885	858	755	756	755	697	710
No. of Infested Blocks	283	284	144	124	118	182	124
Percentage of Blocks Infested	32.0	33.1	19.1	16.4	15.6	26.1	17.5
No. of Contact Blocks	689	681	675	629	654	556	537
Percentage of Contacts Infested	47.0	49.0	39.0	31.0	29.2	45.0	37.4

As in the past, the Apple Maggot Control Board and the Food Production and Inspection Branch of Agriculture Canada cooperated in carrying out the fall orchard inspections. A total of 13 inspectors participated in the five-week survey during which time 1,247 inspections were completed (710 of these were commercial orchards).

BERRY CROPS

The 1984 season for berry crops, excluding lowbush blueberries, resulted in increased production and returns to producers. In 1984, these crops grossed Nova Scotia growers $5,737,722, an increase of $414,120.00 over 1983 returns.

Strawberries

The 1984 Nova Scotia strawberry industry is valued at $4,651,222. This is a ten percent increase over the 1982 value and a 118 percent increase since 1980.

The 1984 strawberry season will be remembered for the largest crop Nova Scotia growers have produced and the largest volume sold. It is believed that fruit sold would exceed five million quarts.

There was a ten percent increase in total acreage to be harvested (approximately, a total of 1,100 acres). In general, 1984 was a very good harvesting season.

Advertising and promotion programs by growers, the Nova Scotia Strawberry Growers' Association, the Nova Scotia Farm Fresh Marketing Association, and Provincial and Federal Departments of Agriculture, were fully developed and utilized during the harvest season.

The Nova Scotia certified strawberry nursery program has experienced phenomenal growth over the past ten-year period. Sales increased from 2.8 million to 16 million plants during this time period. In 1984, over 80 percent of the nursery sales were to other Provinces in Canada and to many states in the United States.

Blueberries

Nova Scotia's 1984 wild blueberry crop totalled 15,264,000 pounds. Although lower than the exceptional production of 1983, this is the second highest crop on record. Production average for the past four years is 15,402,410 pounds. It is expected that the Province's annual production will remain in the 15 to 20 million pound range over the next several years.

The market situation in 1984 was one of depressed prices. Record blueberry crops in most North American production areas for the past three years, combined with higher prices in previous years, resulted in a build-up of carry-over stocks. Inventory levels of processed berries were at record levels going into the 1984 crop season and diminished only slightly through the year.

Processors did not quote a final field price at harvest time. Instead, they advanced 25¢ per pound and asked growers to cooperate in helping to carry inventory. Most growers are anticipating a final settlement at about 30¢ per pound. This would put the farm gate value of the 1984 crop at $4,532,197. Total value to the Provincial economy would be about $9,000,000.

New acreage continues to be cleared for production. During the 1983-84 policy year, a total of 1,558 acres were cleared under the Department's Lowbush Blueberry Land Clearing Policy. Under the 1984-85 policy, 1,035 acres had been cleared as of January 14, 1985.

The Nova Scotia Blueberry Institute is in its second year of operation and acts as a coordinating body for investigative research, providing assistance to the blueberry industry through demonstrations and educational programs and providing field sites for plot research and demonstrations. A block of land (about 17 acres) in the Debert Industrial Park has been deeded to the Nova Scotia Department of Agriculture and Marketing for use in research and demonstration projects.

GREENHOUSE INDUSTRY

There are approximately 41 acres of greenhouses and over 90 commercial greenhouse producers in Nova Scotia. Production is spread through most of the Province with the largest producers situated in Annapolis, Kings, Hants and Cumberland Counties. Total sales for 1983 were $10,682,000.

Ornamental plant production is the largest segment of the industry and includes cut flowers, flowering pot plants, foliage plants, bedding plants and vegetable transplants. Thirty-two acres of greenhouses are used for these crops and sales totalled $9,724,528 in 1983.

The greenhouse vegetable industry is approximately nine acres in size and nearly equally divided between tomato and cucumber production. Marketing takes place between March and October and the 21 producers achieved sales of $957,525 in 1983. Hydroponic production of lettuce is a new crop for one grower and several others are also interested.

MAPLE SYRUP

In Nova Scotia in 1984, 69 maple operations made and sold a total of 17,200 gallons from 167,000 taps. This is a 20 percent increase in production over 1983. The average operation made 249 gallons from 2,420 taps.

The number of taps in Nova Scotia is increasing by nearly 10,000 taps per year, sometimes more. Markets have expanded, so producers need more syrup. They are getting this syrup by adding more taps. As well, two or three new operations start up each year. Thus, in terms of the number of taps, the maple industry has been and continues to be in an expansion stage.

ORNAMENTALS

The landscape sod and nursery industry is valued at $15.2 million in 1984. Over 1,000 people are employed in this industry. The following is a listing of the individual components and the number of establishments in the industry:

Sod Growing — 14 growers, 2000+ acres in production, 2,356,000 square yards harvested; Value $2,500,000
Landscape Contracting — 45 establishments
Landscape Maintenance — 13 establishments
Ornamental Nurseries — 20 establishments; 85 acres
Garden Centres — 28 establishments
Tree Pruners — 8 establishments
Miscellaneous Sales Stations — 50 establishments

The Department of Agriculture and Marketing also provides home garden extension assistance. In addition to handling over 3,500 telephone information requests and 1,400 written requests, an association was maintained with 32 garden clubs and 7 horticultural societies in the Province, having a total membership of 1,200 people. The Nova Scotia Garden Guide is also produced by

this Division. A total of 459 tapes were distributed to 17 radio stations in the Province during the year.

TREE FRUITS

The 1984 growing season would be classed as very good for tree fruit production. There was only minor winter injury as a result of the above-average temperatures during February. An excellent bloom for all tree fruits occurred during the latter part of May with fair pollination conditions. Some growers had a light set of McIntosh as a result of wet weather during peak bloom. Warm and dry weather for a good portion of the growing season resulted in a good quality apple crop being produced. Growers were not faced with any major insect or apple scab problems. The incidence of apple canker, however, appears to be on the rise and growers are becoming concerned about its spread in their orchards.

Apples

The November estimate placed the 1984 apple crop at 3,050,000 bushels which is 250,000 bushels above 1983's crop of 2,800,000 bushels. Although the McIntosh crop was down from 1983's, the production of Gravensteins and other varieties were much higher. The excellent fruit size helped to offset the light fruit set in some orchards. Fruit color generally was good and did not delay harvest. The fresh fruit storage holdings as of November 15th were up eight percent over 1983's. The controlled atmosphere storage holdings were down slightly as a result of the smaller McIntosh crop, while cold and common storage holdings were up.

The overall quality of the 1984 apple crop was very good. Insect injury, apple scab and fruit russetting were not a major concern. Fruit size was up as a result of the warm growing season and light to moderate fruit set. In some cases, fruit size was too large for fresh fruit sales. Fruit colour was good where correct horticultural practices were carried out. Fruit pressure of McIntosh at harvest was down a bit as a result of the larger apples. Incidence of bitter pit was also up a bit as a result of the larger apples and dry spell in July and August.

The Nova Scotia Fruit Growers' Association introduced the McRed label for McIntosh sold in Great Britain. Three packing houses, Scotian Gold Co-op Ltd., Blomidon Produce and R.W.

DeWolfe, are packing and selling McIntosh under this label. Initial results of selling under one label have been very good. The strong dollar and good European crop have restricted exports of the 1984 crop.

Pear and Stone Fruit

The 1984 pear crop was estimated to be 70,000 bushels which would be 20,000 bushels higher than the 1983 crop. Weather conditions during bloom were ideal for good cross pollination and a good bloom is attributed to the increase in yield. There were no major disease or pest problems with regards to the overall pear crop. One farmer, however, had a severe fireblight infection in a block of young pears which resulted in the removal of the seven acre block. It is felt that the above average temperatures in June and July contributed to the rapid spread of this disease.

The harvesting of Clapp Favorite began on August 20 and Bartletts on September 4. The quality of pears was good; however, some growers complained of small Bartletts. The majority of Clapps were sold as fresh fruit on local and the Montreal markets. The average return for pears in 1983 was $8.53/bushel.

The winter temperatures were relatively mild with the exception of -23°C on February 9; therefore, the stone fruit cultivar overwintered well. The plum crop continued to recover from the 1980-81 winter and the 1984 plum crop was placed at 8,000 bushels. This represented an increase of 3,000 bushels over the 1983 crop. Cherry and peach trees also bore good crops in 1984.

VEGETABLES

In the Province, 4,780 hectares (11,950 acres) of vegetable crops are grown by 500 vegetable producers generating an estimated $12.2 million at the farm gate (not including greenhouse vegetable crops). Seventy million kilograms (154 million pounds) of marketable vegetable crops are produced annually. Seventy-five percent of the vegetable crops area is in Kings County, twenty percent is in the Counties of Cumberland, Annapolis, Colchester, Cape Breton and Pictou, five percent is in the Counties of Hants, Lunenburg, Halifax, Yarmouth and Digby.

1984 was a poorer year for vegetable crops than 1983. It was a year of variable yields due to the dry and extremely hot weather during late July and up to mid-August. Early crops of potatoes and peas grew and yielded better than their respective 1983 crops but August crops of cauliflower and potatoes suffered extreme moisture stress and heat. In general, the 1984 crop volume was similar to 1983 but plantings were higher. Quality was down substantially due to increased disease and insect problems caused by the weather conditions (hot and dry). Also maturity was poor due to high vegetative growth in such crops as potatoes, baking beans and cauliflower during the month of September. Prices were generally low in fresh market crops, particularly the storage vegetable crops during the fall season.

BULK BIN POLICY

The Bulk Bin Policy is administered through the Horticulture and Biology Branch. This year, vegetable growers as well as fruit growers were eligible to apply under the Policy. The assistance under the Policy was $10.00 per bin up to a maximum of $1,000.00; minimum number of bins eligible — 25. In order to be eligible, growers had to operate a minimum of five acres of tree fruits or vegetables. The bins were inspected and coded according to the codes used under previous policies.

A total of 69 applications were approved of which 49 were from fruit growers and 20 were from vegetable growers. From this number, 65 claims were processed (46-fruit; 19-vegetable) and there was one claim from a processor.

It has been normal procedure (as requested by the Nova Scotia Fruit Growers' Association) to allocate any unused money to the processors for bins. This year, there was $960.00 remaining at the end of October, which was designated for use by one processor.

EXTENSION BRANCH

OVERVIEW

The role of the Branch is to provide agricultural education, information and service to the commercial farmer, the part-time farmer, and the rural community generally. The Branch also reaches a broader number of people through programs such as 4-H, Women's Institutes, food education, safety, agricultural awareness, home study programs, various short courses, and media coverage. Some new features include farm management for part-time farmers; foods, crafts, and sewing judges' training for exhibitions; and a home study course in family financial management.

AGRICULTURAL REPRESENTATIVES & SPECIAL PROJECT OFFICERS

The primary objective of the Agricultural Representatives and Special Project Officers Division is to provide a co-operatively planned extension education program and advisory service to Nova Scotia farmers, farm organizations and others involved in the agricultural industry in Nova Scotia. Agricultural Representatives provide a "first point contact" to rural clientele on matters related to livestock, crops, soils, farm management, farm loans and rural development.

In 1984, fourteen county offices with a staff compliment of 37 people were maintained to serve rural Nova Scotians. Through farm and office calls, short courses, meetings, radio broadcasts and news releases, staff deliver extension education programs, production, marketing and financial information required by the clientele to improve their economic viability and standard of living. It is the responsibility of the Agricultural Representatives to communicate and provide up-to-date information on all matters relating to agricultural production and marketing. This involves technical as well as policy information.

FARM MANAGEMENT

The primary objective of the Farm Management Division is to assist Nova Scotia farmers, farm leaders and Nova Scotia Department of Agriculture and Marketing staff in developing their farm business management knowledge and skills. Farm Management is concern-

ed with the management of all resources available to the farm manager and with decision making. Decision making implies choosing among alternatives. The major emphasis of our program and services is to meet this objective of providing information, guidance and analysis to clients to enable them to enhance their business management skills.

Farmer Counselling

Individual farmer contact continues to be a major part of our Farm Management Extension Program. This contact may be either in the form of farm calls by our staff or through farmers seeking assistance by calling our offices. During 1984, we had a total of 887 farm calls and calls to the office by farmers. A breakdown of the purpose of these calls is as follows:

Record Systems and Analysis	232
Pre-Loan Counselling	218
Business Agreements & Tax Management	118
Financial Management and Analysis	134
General Farm Management	185

During 1984, staff prepared 185 formal budgets for farmers. These budgets were primarily in the form of cash flow projections.

An indication of the respect enjoyed by our staff is provided by the number of clients referred to us by others in the Department of Agriculture and Marketing, by bankers, by lawyers and by accountants. In 1984, we had a total of 283 referrals for assistance.

Farm Organizations

During 1984, the Branch continued its work with farm organizations. This involvement continued at, or above, previous levels. Primarily, its work with farm organizations has been one of providing economic expertise to various producer groups.

Education Programs

One of the key roles of the Farm Management Division is to enhance the business management knowledge and skills of clients. While part of this objective can be met by individual contact, educational programs are another method that is used by our staff. During

1984, staff participated in 51 short courses and workshop sessions throughout Nova Scotia. Attendance at these sessions totalled 750 people.

Management Information Programs

The need for up-to-date, reliable management information related to costs, returns and production co-efficients has been increasing over the past number of years. We have attempted to fill part of this need of our clients.

In 1984, we prepared and distributed a number of farm business summaries, production cost studies and farm management fact sheets relating to the farm business management area.

4-H AND RURAL YOUTH

"4-H Scores in 84" was the 1984 4-H Theme. It exemplified that 4-H has many avenues of project work, promotes and teaches new skills and reaches a wide range of clientele. The theme was featured throughout the year at all shows and 4-H events.

Nova Scotia 4-H Council

The Nova Scotia 4-H Council played an active role in designing programs and advising changes for the 4-H program. In 1984, the Nova Scotia 4-H Council approved participation in an international 4-H project in Montserrat, British West Indies, and started the fund raising campaign for a multi-purpose building at Camp Rankin. The Nova Scotia 4-H Council was guided by the capable leadership of President, Sisca Bekkers of Antigonish County.

Nova Scotia 4-H Weekend

Over 400 volunteers and members attended Nova Scotia 4-H Weekend held May 11th-13th, 1984, at the Nova Scotia Agricultural College, Truro, Nova Scotia. Competitions were held in public speaking, demonstrations, square dancing, woodsmanship, posters and decals. On Saturday, May 12th, over 1,000 attended 4-H Night in Nova Scotia at Cobequid Education Centre, Truro. This program features the weekend's winners as well as National 4-H Award recipients.

Competitors in public speaking and demonstrations went on to Atlantic Competition and took top honors.

Nova Scotia 4-H Show

The Nova Scotia 4-H Show was held September 28th-30th, 1984, at the Eastern Exhibition Grounds in Antigonish, Nova Scotia. Over 10,000 people attended the three-day event. This 4-H Show featured the top 4-H projects and competitors from each county. It has provided a valuable incentive to improve the quality of 4-H project work.

The 4-H Market Steer and Lamb Show 'N' Sale had enthusiastic participation. Fifteen (15) steers sold for an average of $1.00 per pound or $2.20 per kilogram. Also 15 market lambs were sold for an average of $1.95 per pound or $4.29 per kilogram.

Both programs were organized by a committee of volunteer adult leaders.

Other 4-H Activities

A Nova Scotia 4-H Alumni was established by the Collegiate 4-H Program. This can be a valuable resource group.

Nova Scotia hosted the second Maritime Livestock Management Tour. Twenty-four (24) young farmers from the Atlantic Provinces participated. It ended with a livestock judging competition at the Atlantic Winter Fair.

The Nova Scotia 4-H Leaders' Conference was held at the Delta Barrington in Halifax on October 26th-28th, 1984. Sixty-four (64) adult volunteers participated.

The Nova Scotia 4-H Leadership Seminar was held March 11th-14th, 1985, at the Atlantic Christian Training Centre, Tatamagouche. The theme was "Group Dynamite" and 65 senior 4-H members participated.

Five (5) 4-H camps for intermediate and junior 4-H members were held at Camp Rankin in the summer of 1984. Two hundred and fifty (250) members participated.

4-H Statistics

In 1984, there were 1,259 boys and 1,889 girls participating in the program for a total of 3,148 members. The average age of the membership was 12.9 and the tenure of the members was roughly 2.2 years. Members enrolled in 4,815 projects and completed 3,846 for a completion rate of 80 percent.

In 1984, there were 140 multi-project community 4-H clubs with an average of 22 members. These clubs were led by 861 adult volunteer leaders and 103 junior leaders in 35 different projects. Roughly, the program has one adult leader for every four members.

Project Breakdown

Beef Calf	267	Food	429
Dairy Calf	403	Sewing	280
Poultry	123	Craft	1057
Horse	305	Woodworking	422
Rabbit	222	Outdoorsman	262
Other Livestock	377	Photography	123
Horticulture	308	Others	237

HOME ECONOMICS

The objectives of the Home Economics Division are:

To develop an awareness and an understanding among the general public of the Nova Scotia agricultural industry, to promote utilization of Nova Scotia food commodities and an understanding of the basic management skills necessary to maximize value for every food dollar spent (in terms of both nutrition and economics); to develop leadership, home management and related skills among the members of Women's Institutes and participants in 4-H homemaking, and among farm women for the betterment of themselves, their living environment and their community.

The Home Economics Division's program is co-ordinated by a staff of seven Home Economists located in six regional offices throughout the Province. The Home Economics Division serves a large clientele and meets their needs through courses and the distribution of material, etc. The Division has distributed 45 percent of the Extension Branch's total publications and circulars, con-

ducted 22 percent of the total number of courses, and records 41 percent of the Branch's total attendance at those courses.

Food Education and Promotion

Food education has remained an important aspect of the Home Economics program. The Home Economist sees her role as one of educating the consumer about the Nova Scotia agricultural industry and the products that are produced here.

The media is one of the main avenues the Home Economist uses to get this message across. Regular newspaper columns, press releases, guest articles, radio tapes, open line shows, and interviews are the many avenues used.

The food education program has changed over the years and it has been incorporated effectively in other parts of Home Economics as well. The Women's Institutes, 4-H, and farm women participate in food projects initiated by the Home Economics Division. For example, many 4-H clubs and W.I. branches are active in Nutrition Month and World Food Day programs. Both 4-H and Women's Institutes have been sponsoring groups in the Food Extravaganza program. Farm women have participated in programs to promote the products they produce to the general public. This is a real step forward, with producers taking their product story from the production right through to consumption.

Women's Institutes of Nova Scotia

There has been a shift in the program approach in working with Women's Institutes. Home Economists work more on the planning level of events as well as attend more district and provincial events as opposed to branch meetings.

In Women's Institutes, there have been some new branches formed and some new members, but not enough to make up the loss. The Promotion Committee is looking at ways to promote the organization and to keep the work it's doing in front of the public eye. Projects such as Buckle Up Baby, Woman to Woman, and involvement in the Atlantic Winter Fair all help.

The Home Economics Division is developing a leadership program for use by W.I. It is a way to address some of the problems we

identified in that organization. In many branches and districts, there is a lot of energy put into W.I. by its members. They are doing worthwhile projects to benefit themselves and their communities. On a provincial level, the board reacts to more and more issues. They present briefs on behalf of their organization, etc., to bring about change.

4-H

A significant portion of the Home Economics' program is committed to 4-H as over 50 percent of the 4-H membership is enrolled in homemaking projects, crafts, foods and clothing. Achievement Days are still a point where we evaluate each member on their own capabilities; however, the 4-H Show seems to be the focus for the year which highlights the competitive aspect.

There is a lot of effort going into the 4-H Show in terms of the commitment by volunteers and staff to co-ordinate the event. It has proven to be a showcase of 4-H. Homemaking is just as much an integral part of this show as the livestock. All the events require planning to give them the finesse they have at the show. The Bake-Off, Fashion Show, Traditional Craft Competition, Community Quilt, Crafts Competition, and the Nutritional Booth are the homemaking events at the show.

The heritage project has now expanded to become a provincial project for both adult leaders and members. It will be interesting to see the response to it by the adults. The new cake decorating project has been quick to catch on with quite a number of clubs enrolled this year. Both the heritage project and the cake decorating will be part of the 4-H Show.

1984 FARM WOMEN'S CONFERENCE

The fifth Farm Women's Conference was held in Truro with a registration of approximately 100 delegates. This represented a good cross-section of women from all over Nova Scotia. The conference is co-sponsored by the Women's Institutes of Nova Scotia and the Nova Scotia Department of Agriculture and Marketing.

A panel, made up of farm women, was the feature of the first morning's program. The farm women shared their experience and their concerns in connection with the conference theme. The theme

was further explored through a series of workshops entitled, "Planning for your Retirement". Participants discussed the financial aspects of retirement planning, pension plans, estate planning and adjusting to retirement.

Day two of the conference featured sessions on first aid and coping with stress. The afternoon session featured discussions where the delegates priorized a series of recommendations that would express their concerns and provided direction to the Federation, the Department, and other related groups.

EXTENSION AGRICULTURAL ENGINEERING DIVISION

The work of the Extension Agricultural Engineering Division involves the provision of technical support services for various government programs to assist farmers and the agricultural industry in the construction of capital works. These works include farm structures for livestock housing, crop storage and handling, land development works and land protection works. The Division is also involved with providing consultation and technical service related to farm mechanization and crop processing, as well as storage and energy conservation and utilization.

The work of the Division can be reported under five program areas: Land Development, Farm Mechanization, Crop Processing, Land Protection and Farm Buildings.

Land Development Program

This program covers the provision of technical services with respect to land clearing, land forming, drainage, farm pond construction, and dykeland roads. It also involves administrative input and support for the implementation of the Land Improvement Policy, through processing of applications, inspection of works and processing claims for assistance.

A statistical summary of the program is as follows:

No. of applications approved	1,097
Total Value of Applications approved	7,790,436
Grant Value of Applications approved	5,958,950
Value of Claims Processed	4,338,049

Work accomplished on which subsidy was paid:

Land clearing	3,916 acres
Windrow removal	209,527 feet
Apple tree removal	3,022 no.
Underdrainage	2,918,355 feet
Surface ditching	704,685 feet
Ditch spoil levelling	328,488 feet
Land forming	569 acres
Roads on dykelands	32,204 feet
Land levelling	899 acres
Land ripping	60 acres
Lowbush blueberry land clearing	1,107 acres
Firebreak construction	65,209 feet

Land Protection

This area of work includes programs related to the operation and maintenance of tidal dyke systems, the operation and maintenance of flood control structures on the Musquodoboit River and Brierly Brook and the construction of main outlet drainage channels.

A large project was started in Cumberland County to reclaim and develop part of the Fort Lawrence Amherst Marsh.

A statistical summary of the work is as follows:

Aboiteaux relined	8
Aboiteaux repaired	37
Dyke topped	17,200 feet
Main outlet drains	108,270 feet
Ditch spoil levelled	12,250 feet
Rock placed	58,662 tons
Dykes profiled	24 miles
Dykeland ditches profiled	151,400 feet
Upland ditches profiled	154,400 feet

Farm Structures

A major part of Extension Engineering involves engineering work for farm structures.

The Livestock and Livestock Feed Facilities and Structures segments of the Canada/Nova Scotia AFDA Agreement requires

major input from the Extension Engineers. The engineers must provide an engineering assessment to the Agriculture Canada Administrative staff on individual applications.

The Structures Engineers also become involved in various building related matters such as investigation of stray voltage in dairy barns, pollution control, and environmental assessments and lectures to various groups.

The Canada Plan Service continues to be a valued resource in the preparation of plan sets. A total of 3,572 plan sets were distributed.

In addition to CPS plans and stock plans from our own files, 111 farm building plan sets were prepared in the Truro and Kentville Centres. Plans prepared can be categorized as follows:

Beef	20
Dairy	12
Swine	12
Sheep	3
Poultry	3
Fruit & Vegetable	13
Grain, Forage and Feed	7
Special Structures	27
Building Engineering	4
Manure Handling & Storage	10

Crop Processing and Storage

The Extension Engineering Division devotes considerable time and effort to this specialized area of work. The areas of work considered under this heading include:

Fruit and Vegetable Storages
Grain Storage and Feed Facilities — on-farm
Grain Storage and Handling Facilities — provincial centres
Energy Conservation and Alternate Energy Sources

Plans provided for these various facilities are as follows:

Fruit and Vegetable Storages	60
On-farm Grain Storage and Feed Facilities	50
Energy Management and Conservation	30

The Extension Engineering Division is also responsible for providing engineering expertise for the administration and management of, as well as for construction work carried out, at the Provincial Grain Centres for the Provincial Grain Commission. An $800,000 Grain Centre was built at Middleton and an expansion to the Steam Mill Centre was completed.

Farm Power and Machinery

An increasing awareness of the importance of selection and proper maintenance of farm machinery on the part of the agricultural industry is becoming more evident each year. The industry is becoming more efficient through mechanization and mechanization represents very significant capital inputs into the industry.

In this regard, the Power and Machinery Engineer and the Machinery Technician have been involved in a variety of activities. They also have worked in close co-operation with a number of other staff members in undertaking various projects.

The main areas of work in this section involve the following:

Farm Machinery Advisory Committee
Atlantic Farm Mechanization Show
ACAE Power & Machinery Advisory Committee
Blueberry Resource Committee
Vegetable Sub-committee

One of the main thrusts of the work is the holding of machinery evaluations and demonstrations throughout the Province. Twelve machinery evaluation demonstrations and seven field days were held on various topics.

There were also eight short courses conducted on various topics and over 40 farm calls made to individual farmers for various mechanization problems.

The Machinery Engineer has been closely involved with work on the development of a hay compacter. At present, there are four such units in Prince Edward Island and Nova Scotia operating on a trial basis. The machines appear to be working well at the present time and should be of help in the development of the industry.

Atlantic Farm Machinery Institute

This past year saw the creation of the Atlantic Farm Mechanization Institute. In March, 1985, the Institute was created and a Board of Directors put in place.

The Nova Scotia Research Foundation Corporation has been retained by the Board of Directors as the management arm and technical component of the Institute.

The Institute is available to do testing, evaluation, research and design for agriculture and forestry machinery and allied equipment. This work will be done on a cost recovery basis.

COURSES AND RESOURCES FOR PART TIME FARMERS

It is now four years since the home study program was initiated. These courses grew out of the need to reach part-time farmers with a learning package that would suit their schedules and, also, deliver technical knowledge and skills training in a comprehensive way. It is worth noting there is an emphasis on the laying of a broad foundation in the particular subject matter of each course. This approach is intended to educate and develop the individual farmer by providing a wide range of management skills.

The Vocational office of the Nova Scotia Agricultural College provides a valuable service in looking after registrations and mailing and helping in promotion.

In 1984 the publication *Soil Management for Crop Production* was completed and released in January, 1985. *Commercial Vegetable Production Part II* was started and will be completed in 1985. A new chapter has been developed for "Farm Management for Part-Time Farmers in Nova Scotia". In March, a new five-day vocational course called "Farm Management for Part-Time Farmers" was held with 31 participants.

NOVA SCOTIA FARM AND COUNTRY VACATIONS

1984 was a successful year in terms of numbers of guests, guest days and new host homes. In 1984, there were 39 host homes with 6,885 guests staying an average of 1.1 days per guest. Number of guests was up substantially in 1984 — an increase of 43 percent over 1983.

July, August and September were the most popular months for farm and country vacations with 82 percent of the guests vacationing in this period. Bed and breakfast type accommodation seems to be becoming more popular. Of this year's guests, 56.6 percent were from the U.S. with 40.8 percent from Canada.

YOUNG FARMERS CONFERENCE

"Farming — It's Worth It" was the theme of the Young Farmers Conference held in Windsor in mid-March. Attendance was 39, down slightly from last year.

Farm couples on the planning committee took an active role in the planning and were directly responsible for a number of the events held during the Conference. The Conference featured a farm tour, industry displays, talks and discussion on topics such as insurance, workers' compensation, chemical storage and safety, farm and family first aid and agricultural awareness.

Special speakers at the Conference included The Honourable Roger Bacon, Minister of Agriculture; Jimmie Bricker, Royal Bank; and Bob and Marie Wilson, farmers from the Windsor area.

Evaluations completed by participants rated the Conference 4.45 out of a possible five — hence, an excellent evaluation.

NOVA SCOTIA FARM AND HOME SAFETY COMMITTEE

The Nova Scotia Farm and Home Safety Committee aims to promote safety in all aspects of farm life. Members of the committee are drawn from the Nova Scotia Federation of Agriculture, Women's Institute, Workers' Compensation Board and Nova Scotia Department of Agriculture and Marketing. The committee provides a forum for discussion and for co-operative action on rural safety projects.

The Great Farm Safety Quiz contest was a major promotional effort in 1984. The goals of the contest were to encourage the reading of the Farm Safety Guide, to create an awareness of safety techniques and, ultimately, to reduce farm accidents. Some 98 teams participated, representing the Federations of Agriculture, 4-H and W.I.N.S.

Other activities included the production of a safety stick-on logo, two posters on silo safety and manure gases, press releases for Farm Safety Week and a three-province farm safety booth at the Atlantic Farm Mechanization Show in Moncton.

SOILS AND CROPS BRANCH

OVERVIEW

The Soils and Crops Branch is responsible for crop extension activities for all cereal and forage crops grown in Nova Scotia which are utilized either as human or as animal feeds. Tobacco, which is grown entirely as a cash crop, is also the responsibility of the Soils and Crops Branch. The Branch is also responsible for expertise in six other major areas of activity:

(i) Weed expertise for all crops and the administration of the Weed Control Act;

(ii) Soils expertise to serve all branches of the Department of Agriculture and Marketing and other Departments of Government, i.e. Departments of Health, Forestry and Environment;

(iii) Establishing a co-ordinated criteria for land use planning as affected by Agriculture and other Departments of Government, i.e. Development, Transportation, Municipal Affairs, Lands and Forests and Tourism;

(iv) Soil Survey, a section headed by staff of the Federal government under funding of the Soils Resource Research Institute, is supported in Nova Scotia with housing, including laboratory facilities, one full-time professional and one full-time agricultural technician;

(v) Provincial Chemistry Laboratory Services maintained at Truro serves all professional staff of the Department of Agriculture and Marketing, all farmers, market gardeners, greenhouse operators and homeowners in both soil and water sample chemical analysis, as well as livestock feed sample analysis to determine the nutrient content. Plant foliar analysis service is provided to greenhouse operators and orchardists at a nominal cost. All other routine laboratory analysis services are provided free of charge to Nova Scotia residents;

(vi) The Soils and Crops Branch is responsible for the administration of a Pesticide Residue Analysis Service located at the Kentville Agricultural Centre which is cost-shared equally with the other three Atlantic Provinces.

THE SEASON

In total, it was a good crop year for Agriculture but there were extremes which caused problems for some farmers at certain times. The spring brought plants out of their winter dormancy with very few cases of winter kill. Farmers on lighter soils were able to seed early despite April rainfall which was 60 percent above normal. May was much the same with 40 percent more than normal rainfall. June came in cool, turned very warm and sunny for ten days and ended with 20 percent above normal rainfall for the month. The heavy rain lasted into early July but quickly turned to drought conditions which adversely affected shallow rooted crops. 1984 was characterized by extremes that averaged out so that it will be remembered as a good growing year.

Average Temperature and Precipitation Departures From Normal in Nova Scotia During 1984

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Year
Temperature Departure from Normal °(0°C)	+0.4	+5.0	-0.3	+0.4	+1.2	+0.2	+1.6	+2.7	-0.3	0	+0.2	+2.1	+1.2
Precipitation % Departure from Normal	-16	+18	+22	+62	+40	+23	-22	+43	+11	-56	-53	-27	-2

* Normal Period Used in 1951-80 NOTE. . . Values are Eight (8) Station Averages

CROPS

Forage

Forage crops continue to lead the way in total farm value of all crops grown. Hay alone is valued in excess of 26 million dollars. Farmers have generally improved both the growing and harvesting management of their forage crops. Much of the acreage seeded to legume grass mixtures is harvested two or more times per season and the harvest stored in well-maintained and well-managed silos. One forage seed company alone has five door-to-door salesmen working in Nova Scotia and as a result, farmers are seeking advice, ordering early and obtaining the varieties that will perform well under Nova Scotia conditions. Annual ryegrass seed sales have now reached 175 tonnes. Ryegrass continues to perform well under intensive pasture management. A second major use for ryegrass is emerging; it is proving to be especially valuable as a plowdown crop.

Cereal Grains

Total acres devoted to cereal grain expanded again in 1984. Winter wheat acres continue to expand but barley seems to be expanding much faster. New varieties of barley are superior in straw strength and total yield and acres devoted to Leger, Rodeo, Birka and Mic Mac are expanding as more seed becomes available.

Intensive Cereal Management (ICM) continues to interest farmers. Results at the Research and Demonstration level are very encouraging. The inavailability at the farm level of the chemicals needed to make it work is frustrating the wider adoption of this method of protecting barley and wheat crops from disease in order to keep them at high levels of fertility.

Soybeans

Soybeans were grown very successfully by a number of farmers and interest in this crop remains high. New varieties which are proving adaptable to our conditions have brought soybeans to Nova Scotia. Unlike other oil seed crops soybeans can be used directly in ruminant animal rations and, once heat treated, can be used in hog and poultry rations. Because soybeans have the ability to extract nitrogen from the air and to deposit it in the soil, they are valuable in crop rotations and as a soil conservation measure.

Canola

1984 was the third year of commercial-sized seeding of Canola in Nova Scotia. A total of 116.6 ha (290 acres) was seeded on 9 farms across the Province. Seeding dates ranged from May 25 to June 10. The variety Westar, a higher yielding type than the previously used variety Regent, was used. Yields ranged from .6 to 1.7 t/ha (534 lbs to 1,513 lbs./acre). A price of $320/tonne ($290/ton) was received despite the fact that the sample was graded No. 3 due to off-colour. Small plot trials indicated a 30 percent yield reduction over 1983, believed to be due to weather factors. It is a credit to the farmers involved in the project that their weighted average yield was as good as in 1984. Plot results also indicated that significant yield responses could be achieved by increasing nitrogen application from 80 to 125 kg/ha (70 to 110 lbs./acre) (25 percent) changing to an European variety (30 percent), banding fertility (15 percent), and splitting nitrogen (30 percent). Field scale trials on dessication in-

dicated that Reglone was not as effective as Roundup in dessicating the crop.

Handling of the crop was much improved in 1984 with the addition of proper facilities at the Bayhead Elevator by the Grain Commission. Canola can now be delivered in much the same way as barley.

The Nova Scotia Canola Growers Association was formed for marketing and promotion purposes and the members feel the crop has excellent potential as a cash rotation crop in low heat unit areas.

Corn

Corn has now been grown in Nova Scotia for 25 years under modern agricultural conditions. Corn hybrids used now are much superior. Both yields and maturities were very good in 1984 and many dairy farmers are now storing corn as high moisture ear corn. This method of handling corn gives a higher concentrated feed, avoids the cost of drying and the crop can be stored in any structure which is capable of excluding air.

Tobacco

1984 proved to be another excellent year for tobacco production in Nova Scotia. Yields obtained exceeded those in 1984 which stood as an all-time high.

Seventeen growers produced 720,397 kg (1,584,874 pounds) of contract tobacco on 259.2 hectares (648 acres) for an average of 2,739.52 kg/ha (2,446 lbs./acre). Growers received $3.74/kg ($1.70/lb) for a gross return of $2,655,234.44.

Other Crops

Three other crops which are performing very well at the demonstration level are Hulless Oats, Winter Triticale and Winter Rapeseed.

PEDIGREED SEED

The Nova Scotia Pedigreed Seed Production Assistance Policy was continued in 1984. A total of eight seed growers were paid

assistance totalling $6,003.20 (maximum $2,000 per grower) during 1984.

This assistance policy is designed to make cereal seed production in Nova Scotia more profitable so more seed will be grown decreasing Nova Scotia farmers' dependence on imported seed.

NOVA SCOTIA WEED CONTROL ACT

A total of 17 Municipal units complied with the Nova Scotia Weed Control Act and incurred expenditures for Weed Control during 1984. Approved expenditures cost-shared under Sections 7, 8 and 9 of the Weed Control Act totalled $82,642.92.

SOIL AND CROP IMPROVEMENT ASSOCIATIONS

Activity under the name of County Soil and Crop Improvement Associations continues to expand. There are now 12 county or area associations who are staging meetings, tours, demonstration crop projects, soil projects and crop competitions. Each group is headed by a Board of Directors or a Crop Improvement Committee formed under the Federation of Agriculture. Paid Memberships during 1984 totalled 548.

NOVA SCOTIA WINTER GRAIN MARKETING BOARD

The Nova Scotia Winter Grain Marketing Board represents growers of corn, rye, wheat, oats, barley and soybeans who consign their crops to a marketing pool. Grain is delivered to central facilities operated by the Provincial Grain Commission and is sold by the Marketing Board on a graded, dry and cleaned basis (except high moisture barley and corn).

Marketing of 1984 Crop

Pool	1984		1983		1984 Average Returns		1983	
	tonnes	tons	tonnes	tons	/tonne	/ton	/tonne	/ton
Corn	2433	2207	1383	1254	$190	$172	$209	$189
Rye	1443	1309	1675	1519	171*	155	163	148
Wheat (Feed)	1398	1268	1151	1044	207	188	208	189
Wheat (Flour)	2163	1962	2463	2234	230	209	220	199
Oats	1731	1570	1427	1294	173*	157	167	151
Barley	1317	1195	1053	955	174	158	159	144
Soybeans	307	279	109	99	283	256	402	365
	10792	9790	9261	8399		*incomplete		

** Returns for 1984 reflect Feed Freight Assistance payments which apply to locally grown grain offered for sale.

The Advance Payment System to cover locally grown grain has been well received by Nova Scotia growers and has proved to be a further incentive to increase cereal grain production. Under this program, growers receive 80 percent of the anticipated market price at time of delivery to a grain center and the remainder when final costs, charges and sales have been determined. Total money involved in 1984 advance payments was $1,448,307 of which $696,986 was from Provincial funding and $751,321 was Federal funding. Advance payments during 1984 were $117,000 above the $1,331,011 total for 1983.

FERTILIZER ASSISTANCE POLICY

County	No. of Applications	Average /Application	Total Expenditure
Annapolis	161	$561.17	$ 90,347.72
Antigonish	153	868.07	132,814.83
Cape Breton	64	652.65	41,769.32
Colchester	284	686.04	194,835.16
Cumberland	195	629.75	122,801.60
Digby	32	236.02	7,552.63
Guysborough	40	269.70	10,787.83
Halifax	75	678.36	50,876.67

Hants	182	691.73	125,894.69
Hants East	102	854.84	87,193.76
Inverness	111	576.32	63,971.79
Kings	499	878.31	438,275.96
Lunenburg	154	349.83	53,873.42
Pictou	226	504.19	113,946.44
Queens	21	216.15	4,539.13
Richmond	6	215.17	1,291.02
Shelburne	2	191.59	383.18
Victoria	22	451.38	9,930.42
Yarmouth	58	453.67	26,312.69
PROVINCE	2,387	$660.83	$1,575,398.26
1983-84	2,430	$655.17	$1,592,070.65
1982-83	2,481	$638.30	$1,583,628.30
1981-82	2,471	$603.69	$1,499,952.27

PROVINCIAL CHEMISTRY LABORATORY

A total of 27,231 samples were received for analysis during the 1984 calendar year. Soil samples increased 5.2 percent and feed samples increased 19.9 percent over the previous year. The following is a summary list of samples received during 1984.

Material	1983	1984	% Change
Soils			
Field	12,997	13,785	
Greenhouse	2,399	2,413	
Sub-Total	15,396	16,198	+ 5.2
Feeds			
Forage	2,650	2,920	
Cereals	926	1,282	
Milled Feeds	1,436	2,054	
Others	1,274	1,279	
Sub-Total	6,286	7,535	+ 19.9
Foliar Tissue			
Commercial	1,242	1,641	
Experimental	866	456	
Sub-Total	2,108	2,097	- .5
Water	1,117	1,228	+ 9.9
Misc.	168	173	
Total	25,075	27,231	+ 8.6